Search Notes for 09/819,252
12/27/2003

Set	Items	Description
S1	319	CDX2
S2	53859	STOMACH(W) CANCER OR GASTRIC(W)CANCER
S3	16392	ESOPHAGEAL(W)CANCER
S4	15	S1 AND S2
S5	9	RD (unique items)
S6	0	S1 AND S3
S7	18732	ESOPHAGEAL(W)(CANCER? OR TUMOR?)
S8	0	S1 AND S7

SYSTEM:OS - DIALOG OneSearch
File 5:Biosis Previews(R) 1969-2003/Dec W3
(c) 2003 BIOSIS
File 155:MEDLINE(R) 1966-2003/Dec W4
(c) format only 2003 The Dialog Corp.
*File 155: Medline is updating again (12-22-2003).
Please see HELP NEWS 154, for details.
File 159:Cancerlit 1975-2002/Oct

SYSTEM:OS - DIALOG OneSearch
File 5:Biosis Previews(R) 1969-2003/Dec W3
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File 155:MEDLINE(R) 1966-2003/Dec W4
(c) format only 2003 The Dialog Corp.
***File 155: Medline is updating again (12-22-2003).**
Please see HELP NEWS 154, for details.
File 159:Cancerlit 1975-2002/Oct
(c) format only 2002 Dialog Corporation
***File 159: Cancerlit ceases updating with immediate effect.**
0014622190 BIOSIS NO.: 200300572867
THE INTESTINE SPECIFIC HOMEOBOX GENES, CDX1 AND CDX2 **, ARE KEY MOLECULES IN INTESTINL PHENOTYPIC EXPRESSION OF GASTRIC CARCINOMA CELLS .**
AUTHOR: Mizoshita Tsutomu (Reprint); Joh Takashi; Ogasawara Naotaka; Watanabe Katsushi; Okumura Fuminori; Seno Kyoji; Yokoyama Yoshifumi; Inada Ken-ichi; Tatematsu Masae; Itoh Makoto
AUTHOR ADDRESS: Nagoya, Japan**Japan
JOURNAL: Digestive Disease Week Abstracts and Itinerary Planner 2003 p Abstract No. M1025 2003 2003
MEDIUM: e-file
CONFERENCE/MEETING: Digestive Disease 2003 FL, Orlando, USA May 17-22, 2003; 20030517
SPONSOR: American Association for the Study of Liver Diseases
American Gastroenterological Association
American Society for Gastrointestinal Endoscopy
Society for Surgery of the Alimentary Tract
DOCUMENT TYPE: Meeting; Meeting Abstract; Meeting Poster
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Background. In general, it is believed that intestinal type of **gastric cancer** develope from intestinal metaplasia, while diffuse type rise from the gastric mucosa. The caudal-type homeobox genes (Cdx) 1 and **Cdx2** are candidates for directing intestinal development, differentiation, and maintenance of the intestinal phenotype in the human and mouse gastrointestinal tract. They are also expressed in the intestinal metaplastic mucosa of the stomach. The aims of this study were 1: to compare Lauren's classification with the phnotepyic classification, and 2: to evaluate Cdx1 or **Cdx2** expression in **gastric cancer** classified into two major groups of Lauren. Methods. Fresh human **gastric cancer** tissues were collected from surgically resected specimens from 70 patients after informed consent. The mRNAs were extracted from 70 frozen tissues and Northern hybridization was performed for Cdx1 and **Cdx2** mRNAs. In addition, the carcinoma tissues were evaluated both histopathologically and phenotypically. Gastric or intestinal phenotyping was performed using mucin histochemical and immunohistochemical techniques; class III mucin MUC5AC, HGM, and MUC6 for evaluation of gastric phenotype, MUC2, sialyl-Tn antigen, sucrase, CD10, and villin for evaluation of intestinal phenotype. We also examined expression of **Cdx2** proteins immunohistochemically. Results. mRNAs for Cdx1 and **Cdx2** were detected small and large intestinal mucosa, but not in gastric mucosa. There is no relationship between Cdx1 or **Cdx2** expression and the Lauren's histological classification (intestinal type: n=32, diffuse type: n=38). However, expessions of Cdx1 and **Cdx2** were apparently linked with intestinal phenotypic differentiation in both intestinal and diffuse type lesions {intestinal (I)phenotype : n=17, gastric-intestinal mixed (GI) phenotype : n=18, gastric(G) phenotype : n=15, unclassified (null) phenotype : n=20, $p<0.05$}. Expression of **Cdx2** protein was detected only in the cancer cells expressing intestinal phenotype, but not in the cancer cells expressing gastric phenotype whatever the carcinoma tissues were close by the intestinal metaplasia associated with the chronic gastritis. Conclusion. 1. Lauren's classification was different from the phenotypical classification and had no relation with Cdx1 and **Cdx2** . 2. Both Cdx1 and **Cdx2** might play important roles in expression of the intestinal phenotype not only in the normal intestine but also in gastric neoplastic tissues..

5/9/2 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0014128181 BIOSIS NO.: 200300086900
Expression of intestine-specific transcription factors, CDX1 and CDX2 **, in intestinal metaplasia and gastric carcinomas.**
AUTHOR: Almeida Raquel (Reprint); Silva Elisabete; Santos-Silva Filipe; Silberg Debra G; Wang Jiangfu; De Bolos Carmen; David Leonor
AUTHOR ADDRESS: IPATIMUP, Rua Dr Roberto Frias s/n, 4200, Porto, Portugal** Portugal
AUTHOR E-MAIL ADDRESS: raquel.almeida@patimup.pt
JOURNAL: Journal of Pathology 199 (1): p36-40 January 2003 2003
MEDIUM: print
ISSN: 0022-3417 _(ISSN print)
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Intestinal metaplasia (IM) is part of a stepwise sequence of alterations of the gastric mucosa, leading ultimately to **gastric cancer** , and is strongly associated with chronic Helicobacter pylori infection. The molecular mechanisms underlying the onset of IM remain elusive. The aim of this study was to assess the putative involvement of two intestine-specific transcription factors, CDX1 and **CDX2** , in the pathogenesis of gastric IM and gastric carcinoma. Eighteen foci of IM and 46 cases of gastric carcinoma were evaluated by immunohistochemistry for CDX1 and **CDX2** expression. CDX1 was expressed in all foci of IM and in 41% of gastric carcinomas; **CDX2** was expressed in 17/18 foci of IM and in 54% of gastric carcinomas. In gastric carcinomas, a strong association was observed between the expression of CDX1 and **CDX2** , as well as between the intestinal mucin MUC2 and CDX1 and **CDX2** . No association was observed between the expression of CDX1 and **CDX2** and the histological type of gastric carcinoma. In conclusion, these results show that aberrant expression of CDX1 and **CDX2** is consistently observed in IM and in a subset of gastric carcinomas. The association of CDX1 and **CDX2** with expression of the intestinal mucin MUC2, both in IM and in gastric carcinoma, indirectly implies that CDX1 and **CDX2** may be involved in intestinal differentiation along the gastric carcinogenesis pathway.

5/9/4 (Item 4 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0013966596 BIOSIS NO.: 200200560107
CDX2 **expression in the stomach with intestinal metaplasia and intestinal-type cancer: Prognostic implications**
AUTHOR: Seno Hiroshi; Oshima Masanobu; Taniguchi Masa-Aki; Usami Kazumasa; Ishikawa Tomo-O; Chiba Tsutomu; Taketo Makoto M (Reprint)
AUTHOR ADDRESS: Department of Pharmacology, Graduate School of Medicine, Kyoto University, Yoshida-Konoe-cho, Sakyo-ku, Kyoto, 606-8501, Japan** Japan
JOURNAL: International Journal of Oncology 21 (4): p769-774 October, 2002 2002
MEDIUM: print
ISSN: 1019-6439
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: **CDX2** , a transcriptional factor expressed in the intestine, is implicated in the development and maintenance of the intestinal mucosa. Recent studies have demonstrated that **CDX2** is expressed in the intestinal metaplasia of the stomach and intestinal-type **gastric cancer** , while it is not expressed in the normal gastric mucosa. To investigate the role of **CDX2** in **gastric cancer** , we determined **CDX2** expression and cell proliferation rate in various types of **gastric cancer** tissues by immunostaining. Surgically dissected **gastric cancer** tissues were collected from 40 patients. Consistent with previous reports, **CDX2** was expressed in most gastric mucosa samples with intestinal metaplasia (89%, 16/18), although it was not found in the adjacent normal mucosa. **CDX2** expression was also detected in 64%

(18/28) of intestinal-type **gastric cancer** cases, whereas it was not observed in the diffuse-type **gastric cancer** (0/12). Moreover, the **CDX2** -positive **gastric cancer** samples showed significantly lower index for Ki-67 immunostaining, indicating reduced cell proliferation rates than in the **CDX2** -negative samples. Importantly, multivariate analysis for the overall survival rate revealed that the **CDX2** -positive **gastric cancer** patients survived significantly longer than the **CDX2** -negative patients. Even among the intestinal-type **gastric cancer** cases, the **CDX2** -positive group showed a lower Ki-67 index and longer postoperative survival than the **CDX2** -negative group. These results collectively indicate that **CDX2** expression in **gastric cancer** tissues can be a novel prognostic marker for patient survival.

5/9/5 (Item 5 from file: 5)

0013627137 BIOSIS NO.: 200200220648

Cdx2 **ectopic expression induces gastric intestinal metaplasia in transgenic mice**

AUTHOR: Silberg Debra G (Reprint); Sullivan Jessica; Kang Eugene; Swain Gary P; Moffett Jennifer; Sund Newman J; Sackett Sara D; Kaestner Klaus H
AUTHOR ADDRESS: University of Pennsylvania, 415 Curie Boulevard, 650 CRB, Philadelphia, PA, 19104, USA**USA

JOURNAL: Gastroenterology 122 (3): p689-696 March, 2002 2002
MEDIUM: print
ISSN: 0016-5085
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Background and Aims: Intestinal-type **gastric cancer** is often preceded by intestinal metaplasia in humans. The genetic events responsible for the transdifferentiation that occurs in intestinal metaplasia are not well understood. **Cdx2** , a transcription factor whose expression is normally limited to the intestine, has been detected in gastric intestinal metaplasia. **Cdx2** induces differentiation of intestinal epithelial cells in vitro; therefore, we sought to establish whether a causal relationship exists between **Cdx2** activation and intestinal metaplasia. Methods: **Cdx2** expression was directed to the gastric mucosa in transgenic mice using cis-regulatory elements of Foxa3 (Hnf3gamma). Transgenic mice were analyzed for histologic and gene expression changes. Results: Histologic examination of the gastric mucosa of the Foxa3/ **Cdx2** mice revealed the presence of alcian blue-positive intestinal-type goblet cells, a hallmark of intestinal metaplasia. In addition, **Cdx2** induced the expression of intestine-specific genes. Conclusions: Gastric expression of **Cdx2** alone was sufficient to induce intestinal metaplasia in mice. These mice represent a powerful tool to investigate the molecular mechanisms that promote intestinal metaplasia. Moreover, as **gastric cancer** in humans is often preceded by intestinal metaplasia, the phenotype described here strongly suggests involvement of **Cdx2** in the initiation of the process leading to intestinal neoplasia of the gastric mucosa.

5/9/7 (Item 7 from file: 5)

0013589825 BIOSIS NO.: 200200183336

Ectopic expression of homeodomain protein CDX2 **in intestinal metaplasia and carcinomas of the stomach**

AUTHOR: Bai Yun-Qing; Yamamoto Hiroshi; Akiyama Yoshimitsu; Tanaka Hiroyuki ; Takizawa Touichirou; Koike Morio; Yagi Osmar Kenji; Saitoh Kiyoshi; Takeshita Kimiya; Iwai Takehisa; Yuasa Yasuhito (Reprint)
AUTHOR ADDRESS: Department of Molecular Oncology, Graduate School of Medicine and Dentistry, Tokyo Medical and Dental University, 1-5-45 Yushima, Bunkyo-ku, Tokyo, 113-8519, Japan**Japan

JOURNAL: Cancer Letters 176 (1): p47-55 February 8, 2002 2002
MEDIUM: print
ISSN: 0304-3835
DOCUMENT TYPE: Article

RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: The roles of **CDX2** and CDX1 homeobox genes during gastric carcinogenesis remain poorly defined. We have studied the expression of **CDX2** /1 in gastric cancers and intestinal metaplasia (IM) of 69 gastric carcinoma patients by immunohistochemistry. **CDX2** /1 were shown to be ectopically overexpressed in IM in 41 (85%) of 48, and 47 (90%) of 52 cases, respectively. The expression of **CDX2** /1 was detected in 38 (55%) and 51 (74%) of the 69 gastric carcinomas, respectively. The histological type of the gastric carcinomas was independently associated with **CDX2** expression, but not with that of CDX1, with higher **CDX2** expression in intestinal type (differentiated type) than in diffuse type (undifferentiated type) gastric carcinomas. Our results thus suggest that **CDX2** and CDX1 may play a role during IM formation and gastric carcinogenesis.

5/9/8 (Item 8 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0012680267 BIOSIS NO.: 200000398580
Distinct expression of CDX2 **and GATA4/5, development-related genes, in human** gastric cancer **cell lines**
AUTHOR: Bai Yun-Qing; Akiyama Yoshimitsu; Nagasaki Hiromi; Yagi Osmar Kenji ; Kikuchi Yoko; Saito Naoya; Takeshita Kimiya; Iwai Takehisa; Yuasa Yasuhito (Reprint)
AUTHOR ADDRESS: Department of Hygiene and Oncology, Tokyo Medical and Dental University School of Medicine, 1-5-45 Yushima, Bunkyo-ku, Tokyo, 113-8519, Japan**Japan
JOURNAL: Molecular Carcinogenesis 28 (3): p184-188 July, 2000 2000
MEDIUM: print
ISSN: 0899-1987
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: **CDX2** is a tumor-suppressor homeobox gene involved in colon carcinogenesis, but its role in **gastric cancer** is unknown. Although GATA4, -5 and, -6 transcription factors have distinct functions in the regulation of gastrointestinal epithelial cell differentiation, there have been no reports regarding TAGA4/5/6 alterations in gastrointestinal carcinomas. By using a semiquantitative reverse transcription-polymerase chain reaction assay, we studied the expression of gut development-related genes **CDX2** /1 and GATA4/5/6 in 11 human **gastric cancer** cell lines. The expression of **CDX2** appeared to progressively decrease with the transition from well differentiated to poorly differentiated cancer cell lines. CDX1 was below detectable levels in all cell lines. The expression of GATA4 and GATA5 was undetectable in four and six cell lines, respectively, whereas the majority of the cell lines expressed GATA6 abundantly. These results suggest that **CDX2** and GATA4/5 may be associated with the carcinogenesis of the stomach.

Set	Items	Description
S1	319	CDX2
S2	53859	STOMACH(W) CANCER OR GASTRIC(W)CANCER
S3	16392	ESOPHAGEAL(W)CANCER
S4	15	S1 AND S2
S5	9	RD (unique items)
S6	0	S1 AND S3
S7	18732	ESOPHAGEAL(W)(CANCER? OR TUMOR?)
S8	0	S1 AND S7

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Search History

DATE: Saturday, December 27, 2003 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=ADJ			
L9	5601990.pn.	1	L9
DB=PGPB; THES=ASSIGNEE; PLUR=YES; OP=ADJ			
L8	5601990.pn.	0	L8
L7	L6 and stomach cancer	3	L7
L6	cdx2	17	L6
DB=USPT,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ			
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DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=ADJ			
L4	cdx2	6	L4
L3	cdx2 homeobox	1	L3
L2	cdx2	6	L2
L1	cdx2 homeobox	1	L1

END OF SEARCH HISTORY